

REMARKS/ARGUMENTS

Claims 1-12 remain in this application. Claims 1 and 9 have been amended.

Claim Objections

Claim 1 is objected to because of the following informalities: The word “cabable” appears to be a typographical error. The Examiner believes the word should read “capable”. Appropriate correction is required.

Claim 1 has been amended. The word “cabable” has been replaced by the word “capable”.

Claim Rejections

Claim 2 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 10 of copending Application No. 10/817,234. Claims 9 and 10 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 20 and 21, respectively, of copending Application No. 10/817,234. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

This rejection is now moot because claims 10, 20 and 21 of the copending Application No. 10/817,234 had been cancelled by the amendment dated 8/16/05.

Claims 1 and 7 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant Admitted Prior Art (AAPA).

Applicants respectfully disagree that claims 1 and 7 are anticipated by the disclosed Prior Art because the disclosed Prior Art includes every element of claims 1 and 7.

More specifically, claim 1 specifies that the claimed spool comprises “flanges including at least one smoothly curving arcuate fiber groove on a side facing said hub...said groove being capable of reversing the direction of the fiber”. This feature is not disclosed by the AAPA. Figure 2 of the Applicant’s drawing depicts AAPA and shows that the fiber reversing groove 20 is NOT on the side facing the hub. Page 2, lns. 1-3 of the Applicants’ specification explicitly describe that the fiber “exits the spool via the fiber exit or reverse groove 20, provided on the external surface of one of the flanges.” Claim 7 depends from the independent claim 1 as its base claim and, therefore, incorporates the language of claim 1.

Please note that the groove 15 is an underlay groove utilized to get the DCF to the hub, and it does not reverse the direction of the fiber, which is why the prior art devices utilized the external groove 20.

Accordingly, claims 1 and 7 are not anticipated by the AAPA.

Claims 2-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA).

Claims 2-4 depend from the independent claim 1 as their base claim, and, therefore, incorporate the language of claim 1. Since AAPA does not disclose a groove being capable of reversing the direction of the fiber, which faces the hub, Claims 2-4 are not unpatentable over the AAPA.

Furthermore, AAPA does not disclose that the specified angles (i.e, less than 15, 5 or 3 degrees). Applicants found that these angles minimize fiber bending, and losses associated with fiber bending. For example, page 8, (lns 1-6) of the Applicant’s specification describes that a flange perform may have several grooves (120A, 120B,

120C, 120D) of different diameters, so that when states that when the perform is cut to provide the flange of the required size (diameter D_F) at least one groove “would allow the fiber to exit the flange at a shallow angle, preferably parallel to the circumference of the flange...and the (ii) the fiber bend radius be larger than the minimal acceptable radius”. Thus, Applicant does describe the reasons for shallow angles.

With regard to claim 9 and 11, AAPA fails to disclose trimming the flange performs to the desired size. The prior art flanges were made to specification, and were designed to for specific hubs. The AAPA flanges could not be made from a universal perform and are not capable of being trimmed to a wide range of sizes for the following reason: cutting the AAPA flange with a groove 20 down in size would change the angle of the groove 20 near the edge of the flange, thus placing this groove it at a sharp angle with respect to the new edge of the flange, thus no longer minimizing fiber bending. Thus claim 9 is not obvious over AAPA.

Applicants solved this problem by creating a perform with several exit grooves of different sizes (See Figures 7 and 8), so when the flange perform is trimmed down in size, there is at least one grove that has the curvature relative to the edge of the flange which allows the fiber without inflicting unacceptable bend losses on the fiber.

That is, Applicant's flanges are capable of being trimmed down from the perform, to the desired size, while the AAPA flanges cannot. Accordingly claims 9 and 11 are not obvious over the AAPA. It is notes that in order for the claims to be obvious over the prior art, the references themselves have to teach the desired modification, or to provide an incentive for such modification. Such an incentive or teaching is absent from AAPA.

Claims 10 and 12 depend from the independent claims 9 and 11, respectively, and, therefore, are also not obvious over the AAPA.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,802,237 to Pulido.

Applicants respectfully disagrees with this assertion because the cited reference does not disclose the following feature “at least one of said flanges including at least one smoothly curving arcuate fiber groove on a side facing said hub, said fiber groove extending substantially to the outer edge of said flange, said groove being at an angle θ relative to the tangent line to the periphery of said flange, said groove being capable of reversing the direction of fiber.”

As shown in illustration A (enclosed), the fiber in the Pulido spool always moves in the same direction. The fiber does not reverse directions, and is not capable of reversing direction. Furthermore, the Pulido reference itself does not teach or suggest that the groove is capable of reversing direction. The spools of Pulido reference will have to be used with an external device that reverses the fiber direction, for example by going around an external mandrel.

Therefore, claims 1-8 and 11-12 are not obvious over the Pulido reference.

Claims 9-12 include the language that states that the flange is trimmed to the desired diameter. Claim 12 further states that the groove (after the trimming) is being at the angle θ which is less than 5 degrees, relative to the tangent line to the periphery of said flange, said groove being capable of reversing the direction of fiber.

However the Pulido reference does not teach that such trimming is even possible, and does not teach, suggest or gives any incentive for making a flange perform and cutting off material to form a perform of the specified diameter. Absent such teaching or

Application No.: 10/817,235
Amendment Date: September 7, 2005
Reply to Office Action: June 6, 2005
Page 8

suggestion, by the cited reference itself, Applicant's claims 9-12 are not obvious over the cited reference.

Conclusion


Based upon the above amendments, remarks, and papers of records, applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

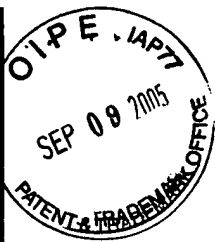
Applicant believes that no extension of time is necessary to make this Reply timely. Should applicant be in error, applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Svetlana Z. Short at 607-974-0412.

Respectfully submitted,

DATE: 9/7/05


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U.S. Patent

Sep. 1, 1998

Sheet 1 of 4

5,802,237

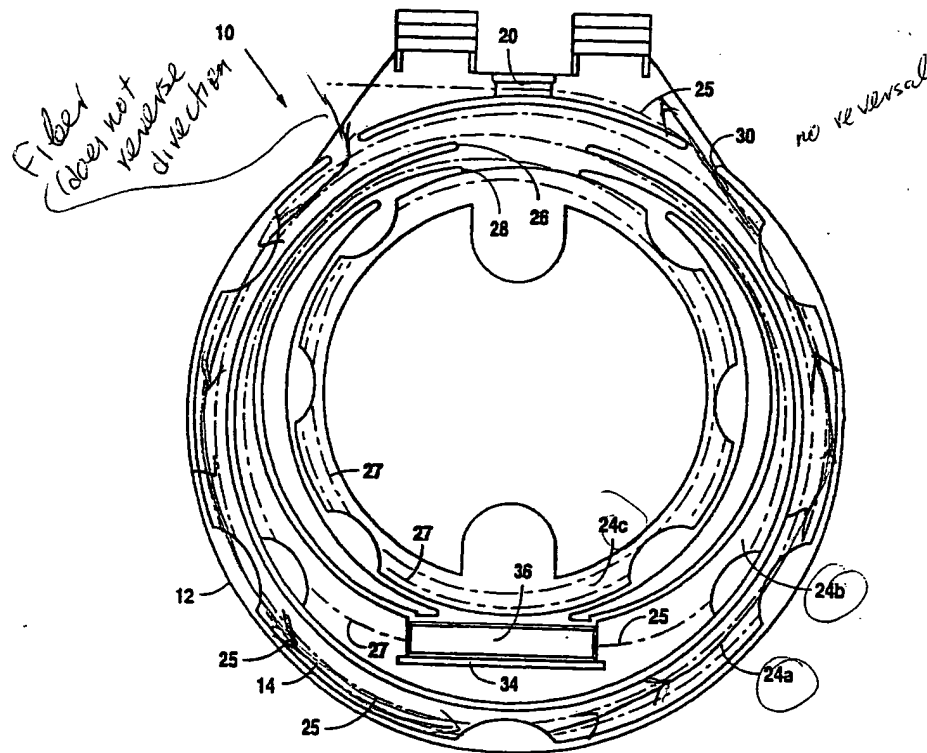
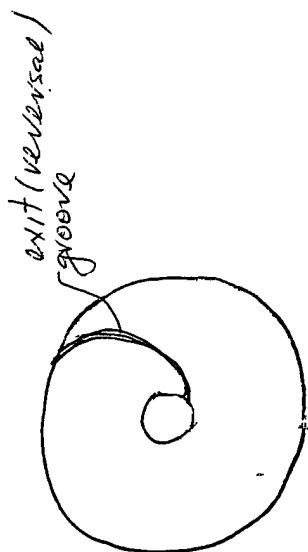


Fig. 1

(Only one loop around shown for simplicity)



Applicant's exemplary flange

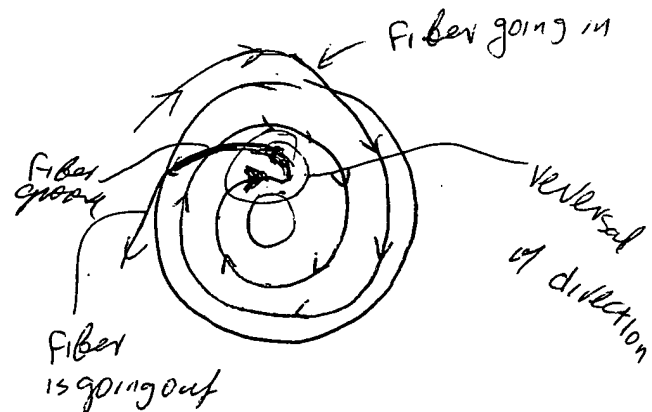


Illustration A